

DAY 1: 14 March 2016

9.00-11.00: inscription and informal welcome chat/meeting

11.00-11.20: Welcome by Joseph Hell, Mayor Yaoundé

11.20-11.50: ***Key lecture Hell***

11.50-12.20: ***Key lecture Tanyileke***

12.20-14.00: Opening ceremony + icebreaking cocktail + lunch

NOTE: the morning program is still to be detailed by the LOC, and hence subject to changes with respect to reported here.

1. How the lake basins form: geology of volcanic lake settings

Conveners: Festus Aka, Boris Chako Tchamabé

14.00-14.20: Kankeu et al. (T1.1)
Geological setting for the formation of maars along the Cameroon Volcanic Line (CVL)

14.20-14.40: Asaah et al. (T1.2)
Geochemistry of Lavas from Maar-bearing Volcanoes in the Oku Volcanic Group of the Cameroon Volcanic Line

14.40-15.00: Hasegawa et al. (T1.3)
Eruption history of Nyos volcano, northwestern Cameroon

15.00-15.20: Nkouathio et al. (T1.4)
Origin and evolution of Lake Nyi volcano (Mount Oku, CVL)

15.20-15.40: Gountié et al. (T1.5)
Lake Oku (Cameroon Volcanic Line): emission center of pyroclastic density current deposits in Mounts Oku and Bamenda identified from magnetic studies (AMS) of ignimbrites

15.40-16.00: COFFEE BREAK

2. Bio-activity lakes: a new lake type

Conveners: Edwige Tiodjio, Jacopo Cabassi

16.00-16.20: Cabassi et al. (T2.1)
Interactions between microorganisms and chemical-physical characteristics in the volcanic lake of Averno (Phlegrean Fields, Southern Italy)

<u>16.20-16.40:</u>	<u>Tassi et al.</u>	<u>(T2.2)</u>
	Seasonal development of bioactivity in monomictic volcanic lakes from São Miguel Island (Azores Archipelago, Portugal)	
<u>16.40-17.00:</u>	<u>Tiodjio et al.</u>	<u>(T2.3)</u>
	Analyses Of Prokaryotic Communities In Lakes Nyo and Monoun (Cameroon)	
<u>17.00-17.20:</u>	<u>Nkengazong et al.</u>	<u>(T2.4)</u>
	Compatibility studies of <i>Schistosoma haematobium</i> with two sympatric species of Bulinid snails from the Barombi Kotto lake, Cameroon	
<u>17.20-18.30:</u>	<u>POSTER SESSION 1</u>	

DAY 2: 15 March 2016

3. Storage and release of gas from Nyos-type lakes I: geochemical and limnological aspects

Conveners: George Kling, Minoru Kusakabe

<u>9.00-9.30:</u>	<u>***Key lecture Kusakabe et al.***</u>	<u>(T3.1)</u>
	CO ₂ content in Lakes Nyos and Monoun over the last 30 years	
<u>9.30-9.50:</u>	<u>Halbwachs & Maj</u>	<u>(T3.2)</u>
	Typology of a two-phase flow: calculation of a degassing column	
<u>9.50-10.10:</u>	<u>Halbwachs & Canet</u>	<u>(T3.3)</u>
	Definition of a security coefficient for lakes with dissolved gas	
<u>10.10-10.30:</u>	<u>Boehrer et al.</u>	<u>(T3.4)</u>
	Quantifying and removing the carbon dioxide gas oversaturation in the meromictic Guadiana pit lake	
<u>10.30-11.30:</u>	<u>COFFEE BREAK + POSTER SESSION 2</u>	
<u>11.30-11.50:</u>	<u>***Key lecture Kling***</u>	<u>(T3.5)</u>
	On the Dangers and Solutions in Gas-Charged Lakes - Lessons from Nyos and Monoun	
<u>11.50-12.10:</u>	<u>Hirslund</u>	<u>(T3.6)</u>
	Managing the dangers in Lake Kivu 1 - The mechanism of halocline formation	

12.10-12.30: Hirslund (T3.7)
Managing the dangers in Lake Kivu 2 - Past and present transport mechanisms in the lake

12.30-14.00: *LUNCH BREAK*

4. Storage and release of gas from Nyos-type lakes II: technical and engineering aspects

Conveners: Halbwachs, Sabroux, Greg Tanyileke

14.00-14.30: ***Key lecture Ohba*** (T4.1)
SATREPS-NyMo: A comprehensive international scientific project between Japan and Cameroon for the risk reduction at Lakes Nyos and Monoun

14.30-14.50: Halbwachs et al. (Sabroux) (T4.2)
Technical challenges and achievements of Nyos and Monoun degassing

14.50-15.10: Kozono et al. (T4.3)
Numerical assessment of the potential for future limnic eruptions at Lakes Nyos and Monoun, Cameroon, based on regular monitoring data

15.10-15.30: Folch et al. (T4.4)
High-resolution wind field characterization over lake Nyos area (Cameroon) during 21 August 1986

15.30-15.50: Costa & Chiodini (T4.5)
Modelling atmospheric dispersion of CO₂ released during 21 August 1986 Lake Nyos limnic eruption

15.50-16.10: Chiodini et al. (Rouwet or Costa) (T4.6)
Is a gas outburst from Lake Albano possible? What would be the impact on the Rome metropolitan area?

16.10-... : *COFFEE BREAK + POSTER SESSION 3*

DAY 3: 16 March 2016

5. The reigning reservoir: hydrology around volcanic lakes and indirect hazards and utilities

Conveners: Issa, Wilson Fantong

9.00-9.20: Wong et al. (Halbwachs) (T5.1)

The natural dam of Lake Nyos: evaluation mission on the risk of collapse and proposition to reinforce the dam

9.20-9.40: Wirmvem et al. (T5.2)

Hydrochemical and stable isotope signatures of springs around Lakes Oku and Bambili along the Cameroon Volcanic Line

9.40-10.00: Fantong et al. (T5.3)

Geochemistry of gas-water-rock systems of bubbling springs along the Cameroon Volcanic Line

10.00-10.20: Sabroux et al. (T5.4)

Radon survey of Lake Nyos, Cameroon: searching for a concealed underwater soda spring

10.20-11.20: COFFEE BREAK + POSTER SESSION 4

6. Precursors for unrest and phreatic eruptions: the speed of water and chemical compounds

Conveners: Bruce Christenson, Dmitri Rouwet

11.20-11.50: ***Key lecture Christenson et al.*** (T6.1)

White Island, NZ: Hydrological evolution and chemical structure of a hyper-acidic spring-lake system

11.50-12.10: Rouwet (T6.2)

Geochemical monitoring of peak activity crater lakes: where it's at?

12.10-12.30: Gonzalez et al. (T6.3)

Phreatic eruptions at the acid crater lake of Rincón de la Vieja volcano, Costa Rica (2012-2015): seismic, thermal and chemical monitoring

12.30-12.50: Pecoraino et al. (T6.4)

Trace elements in Specchio di Venere lake waters (Pantelleria Island, Italy)

12.50-14.00: LUNCH BREAK

7. The fluid sound: geophysics translated to volcanic lakes

Conveners: Takeshi Ohba, Shaul Hurwitz (under reservation)

14.00-14.20: Hurwitz et al. (under reservation) (T7.1)

The HD-YLAKE project: The Response of the Yellowstone Lake Hydrothermal Systems to Tectonic, Magmatic, and Climatic Forcing

14.20-14.40: Zimmer et al. (Vaselli) (T7.2)

Real-time gas concentration measurements of CO₂ and CH₄ in volcanic lakes by gas membrane sensors

14.40-15.00: Ohba et al. (T7.3)

The process of limnic eruption in 1984 at Lake Monoun Cameroon suggested by a detailed bathymetric map

15.00-15.20: Saiki et al. (T7.4)

New chemocline detection methods for Lakes Nyos and Monoun using sound speed and transparency of lake water

15.20-16.20: *COFFEE BREAK + POSTER SESSION 5*

16.20-17.00: Presentations proposals CVL10-2019 + voting

17.00-18.00:

- CVL Steering committee meeting
- strategies for 2016-2019
- elections leader, secretary, steering board

18.00-... : closing ceremony

POSTER SESSIONS

1. How the lake basins form: geology of volcanic lake settings

P1.1 Tchamabé and Carrasco-Nuñez Tephrostratigraphy and volcanic evolution of Alchichica Maar (Trans-Mexican Volcanic Belt (TMVB): Preliminary results

P1.2 Tchamabé et al. On the formation and growth of maar-lake basins by multiple craters coalescence: Case of Barombi Mbo Maar (Cameroon)

P1.3 Wotchoko et al. Morphological evolution and eruptive dynamisms of Bambili craters (Mount Bamenda, CVL)

2. Bio-activity lakes: a new lake type

-

3. Storage and release of gas from Nyos-type lakes I: geochemical and limnological aspects

P3.1 Chiodini et al. Origin of the CO₂ at Lake Averno, Campi Flegrei (Italy)

P3.2 Issa et al. Do other lakes of the Cameroon Volcanic Line bear some resemblance with lakes Nyos and Monoun?

P3.3 Hirslund Managing the dangers in Lake Kivu 3 - Which haloclines to preserve and how to achieve it

P3.4 Yaguchi et al. Water quality characteristics of lakes Nyos and Monoun, and their formation mechanism

P3.5 Ohba et al. Temperature and electric conductivity of water in

Lake Nyos transmitted by an automatic observation buoy

P3.6 Halbwachs

A physico-chemical study of the Gulf of Kabuno, which highlights the risk of a cataclysmic gas explosion

4. Storage and release of gas from Nyos-type lakes II: technical and engineering aspects

P4.1 Fantong et al.

Characteristics of chemical weathering and water-rock interaction in Lake Nyos dam (Cameroon): Implications for vulnerability to failure and re-enforcement

P4.2 Halbwachs

Methods for disposing of degassed waters in Lakes Nyos, Monoun, Kivu and Gulf of Kabuno

P4.3 Halbwachs et al.

Prevision of the Nyos water-column stratification response to degassing

5. The reigning reservoir: hydrology around volcanic lakes and indirect hazards and utilities

P5.1 Kantchueng et al.

Surface and ground waters chemistry, isotope hydrology and hydrological processes within a fractured volcanic aquifers: case of lakes Nyos and Monoun, west Cameroon

P5.2 Fantong et al.

Variation of hydrogeochemical characteristics of water in surface flows, shallow wells, and boreholes in the coastal city of Douala (Cameroon): Results from JICA donated equipment to SATREPS-NyMo

6. Precursors for unrest and phreatic eruptions: the speed of water and chemical compounds

P6.1 Inguaggiato et al.

Zr, Hf and Rare Earths Elements signatures discriminating the effect of atmospheric fallout from the hydrothermal input in volcanic lake waters: The case study of lake “Specchio di Venere” (Pantelleria, Italy)

P6.2 Rouwet et al.

Probabilistic hazard assessment at Kawah Ijen volcano (Java, Indonesia): application of BET_UNREST on a crater lake hosting volcano

P6.3 Rouwet et al.

The rise of sulphur spherules towards the surface of Kawah Ijen crater lake, Java Indonesia: insights from SEM and physical modelling

7. The fluid sound: geophysics translated to volcanic lakes

P7.1 Caudron et al.

Anatomy of a hidden phreatic explosion

P7.2 Hurwitz and Sohn

The HD-YLAKE project: The Response of the Yellowstone Lake Hydrothermal Systems to Tectonic, Magmatic, and Climatic Forcing